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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

YUSSUF, SAJID

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/752,808

Applicant(s)

CHUNG ET AL

Examiner

Sajid A Yussuf

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/28/2000-05/25/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5 - 05/25/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

a. A person shall be entitled to a patent unless –

b. (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claim(s) 1-7, 9-28 is/are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al. (US Patent No. 6,381,321 and Brown hereinafter).

5. As per claim(s) 1, 28 Brown discloses providing an interface so that a user may log in; accessing an account associated with the user; wherein a user inherently needs a user login and password to access an operating system like UNIX, (See Column 9 Lines 29-53); automatically detecting hardware resources resident on a local system that are related to telecommunications, (See Column 3 Lines 27-62); pooling the detected hardware resources into related virtual pools; wherein the virtual resource pools are interpreted as administrator defined pools, (See Column 4 Lines 63-67 & Column 5 Lines 1-19); establishing contact with remote systems and obtaining a

status of the resources available on the remote systems; detecting one or more telecommunications applications associated with the user; allocating the available local resources among telecommunications applications that are associated with the user, (See Column 8 Lines 53-67 & Column 9 Lines 1-28); providing an application program interface (API) to a telecommunications applications that enables the telecommunications application to communicate with underlying hardware and remote systems, where the API further automatically compensates for a change in the underlying hardware such that the telecommunications application continues to communicate with the underlying hardware without change to the telecommunications application; wherein in an API is an interfaces that communicates between to different species and therefore is interpreted as an interface used for translating communication between hardware and software, (See Column 4 Lines 12-31); re-allocating available local resources in response to an imbalance, (i.e., load balancing) between telecommunications related resources allocated and telecommunications related resources consumed, (See Column 10 Lines 28-43); and requesting and receiving resources from a remote system in response to an inadequacy in locally available resources, (See Column 8 Lines 53-67 & Column 9 Lines 1-28).

6. As per claim(s) 2 Brown teaches the claimed invention as described in claim(s) 1 above and furthermore discloses detecting the presence and configuration of underlying telecommunications hardware with hardware drivers provided by vendors of the respective hardware; wherein when using hardware devices, vendors may likely supply the drivers necessary to operate the hardware device, (See Column 7 Lines 1-49 & Column 13 Lines 20-36).

7. As per claim(s) 3 Brown teaches the claimed invention as described in claim(s) 1-2 above and furthermore discloses activating a telecommunications application through a multi-thread capable attach module, (i.e., session manager module), which attaches to at least one telecommunications application to report status of transactions, (See Column 10 Lines 44-53).

8. As per claim(s) 4 Brown teaches the claimed invention as described in claim(s) 1-3 above and furthermore discloses detecting a change in the underlying hardware and reconfiguring the virtual pools in accordance with the changed hardware, (See Column 13 Lines 45-57).

9. As per claim(s) 5 Brown teaches the claimed invention as described in claim(s) 1-4 above and furthermore discloses detecting an error in a local resource; alerting a telecommunications application associated with the local resource; retrieving a repair rule from a database, where the repair rule corresponds to the error; and reinitializing the local resource in accordance with the repair rule, (See Column 12 Lines 45-67 & Column 13 Lines 1-3).

10. As per claim(s) 6 Brown teaches the claimed invention as described in claim(s) 1-5 above and furthermore discloses detecting that an error in a local resource; alerting a telecommunications application associated with the local resource; alerting a system administrator of the error; monitoring steps taken by the system administrator to correct the error; storing the steps in a database as a repair rule; and retrieving the repair rule and correcting the error in the local resource in response to a subsequent detection of the error, (See Column 12 Lines 45-67 & Column 13 Lines 1-3).

11. As per claim(s) 7 Brown teaches the claimed invention as described in claim(s) 1-6 above and furthermore discloses detecting an error in a local resource; alerting a telecommunications application associated with the local resource; retrieving a repair rule from a database, where the repair rule corresponds to the error; comparing an initialization allocation from the repair rule to a present allocation of the resource; and allocating more than the initialization allocation from the repair rule when the present allocation is at least as great as the initialization allocation, (See Column 12 Lines 45-67 & Column 13 Lines 1-3).

12. As per claim(s) 9 Brown teaches the claimed invention as described in claim(s) 1-8 above and furthermore discloses monitoring and tracking the usage of local resources by a plurality of

telecommunications applications; associating the resources consumed by user; and restricting further access, (i.e., load balancing) to at least one telecommunications application in response to the resources consumed exceeding a predetermined amount, (See Column 9 Lines 54-67 & Column 10 Lines 1-67).

13. As per claim(s) 10 Brown teaches the claimed invention as described in claim(s) 1-9 above and furthermore discloses logging events that indicate a shortage of resources; providing an alert to increase a capacity associated with at least one resource, where the events logged indicate a lack of capacity associated with the resource, (See Column 8 Lines 52-67 & Column 9 Lines 1-28).

14. As per claim(s) 11 Brown teaches the claimed invention as described in claim(s) 1-10 above and furthermore discloses the contact with the remote systems is established via the Internet, (See Column 8 Lines 44-65).

15. As per claim(s) 12 Brown discloses a system integration layer that communicates with underlying hardware and the general operating system, where the system integration layer further arranges available hardware resources into virtual resource pools, (See Column 9 Lines 54-67 & Column 10 Lines 1-15); a telecommunications service application layer that includes application program interfaces (APIs), which provide protocols and routines that allow a higher-level application to communicate with underlying hardware with a program interface so that the higher-level application is portable from one hardware system to another, where the telecommunications service application layer further includes a messaging protocol that translates and formats data to and from the APIs to a format compatible with the underlying hardware, (See Column 4 Lines 12-31); and a telecommunications operating system layer that coordinates data transfers to and from the system integration layer and the telecommunications service application layer, the telecommunications operating system layer configured to monitor available resources on the underlying local hardware and on remote systems, the telecommunications operating system layer further configured to allocate available resources among detected local telecommunications applications and configured

to reallocate the resources in response to changes in resource demands, (See Column 9 Lines 54-67 & Column 10 Lines 1-67).

16. As per claim(s) 13 Brown teaches the claimed invention as described in claim(s) 12 above and furthermore discloses in the system integration layer further includes a user authentication control configured to receive a user ID and a password to authenticate a first user account; wherein a user inherently needs a user login and password to access an operating system like UNIX, (See Column 9 Lines 29-53).

17. As per claim(s) 14 Brown teaches the claimed invention as described in claim(s) 12-13 above and furthermore discloses the system integration layer further includes a user authentication control configured to receive an encrypted user ID and an encrypted password to authenticate a second user account; wherein a user inherently needs a user login and password to access an operating system like UNIX, and furthermore the ID and password are encrypted, (See Column 9 Lines 29-53)

18. As per claim(s) 15 Brown teaches the claimed invention as described in claim(s) 12-14 above and furthermore discloses the system integration layer is further configured to detect a presence and a configuration of a telecommunications related hardware by using a hardware driver associated with the hardware; wherein when using hardware devices, vendors may likely supply the drivers necessary to operate the hardware device, (See Column 7 Lines 1-49 & Column 13 Lines 20-36).

19. As per claim(s) 16 Brown teaches the claimed invention as described in claim(s) 12-15 above and furthermore discloses the virtual resource pools comprise a SS7 signaling link pool, a digital channel pool, an analog channel pool, an ISDN channel pool, a voice channel pool, and a fax channel pool, (See Column 4 Lines 53-67 & Column 5 Lines 1-19).

20. As per claim(s) 17 Brown teaches the claimed invention as described in claim(s) 12-16 above and furthermore discloses the telecommunications service application layer further includes resource share definitions configured to define how a resource is allocated, (i.e., through the use of multiple modules) among available telecommunications applications, (See Column 4 Lines 39-67 & Column 5 Lines 1-28).

21. As per claim(s) 18 Brown teaches the claimed invention as described in claim(s) 12-17 above and furthermore discloses the APIs of the telecommunications service application layer are further configured to provide outbound calling, call bridging, and call forwarding functions, (See Column 16 Lines 1-64).

22. As per claim(s) 19 Brown teaches the claimed invention as described in claim(s) 12-18 above and furthermore discloses the APIs of the telecommunications service application layer are further configured to provide reproduction of voice files, (See Column 16 Lines 1-64).

23. As per claim(s) 20 Brown teaches the claimed invention as described in claim(s) 12-19 above and furthermore discloses the APIs of the telecommunications service application layer are further configured to receive fax messages functions, (See Column 16 Lines 1-64).

24. As per claim(s) 21 Brown teaches the claimed invention as described in claim(s) 12-20 above and furthermore discloses the APIs of the telecommunications service application layer are further configured to return an allocation of a pool when a resource is no longer used by a telecommunications application, (See Column 19 Lines 57-67 & Column 20 Lines 1-20).

25. As per claim(s) 22 Brown teaches the claimed invention as described in claim(s) 12-21 above and furthermore discloses the telecommunications service application layer further includes at least one higher-level application module adapted to communicate with the APIs to provide a telecommunications application, (See Column 16 Lines 1-32).

26. As per claim(s) 23 Brown teaches the claimed invention as described in claim(s) 12-22 above and furthermore discloses the telecommunications operating system layer is further configured to receive data from a remote telecommunications application in a data packet, where the data packet includes a header that designates a type of resource pool and an amount of resources from the resource pool, (See Column 8 Lines 44-65).

27. As per claim(s) 24 Brown teaches the claimed invention as described in claim(s) 12-23 above and furthermore discloses the data packets are transmitted over the Internet, (See Column 8 Lines 33-65).

28. As per claim(s) 25 Brown teaches the claimed invention as described in claim(s) 12-24 above and furthermore discloses the telecommunications operating system layer further includes a Call Detailed Record generation module configured to monitor and to maintain a record of transactions that use local resources, (See Column 12 Lines 45-62).

29. As per claim(s) 26 Brown teaches the claimed invention as described in claim(s) 12-25 above and furthermore discloses the telecommunications operating system layer is further configured: to detect that a resource pool is unable to supply a desired amount of resources for a telecommunications application; to receive a status of available resources on remote systems; and to share resources with a remote system to make the remote system resource available to the telecommunications application, (See Column 10 Lines 38-67 & Column 11 Lines 1-52).

30. As per claim(s) 27 Brown teaches the claimed invention as described in claim(s) 12-26 above and furthermore discloses the telecommunications operating system layer further includes a local channel resource management module that is configured to detect when a resource within a pool in use by a telecommunications application has run low on available resources, and to switch to the

telecommunications application to use another resource within the pool, (See Column 8 Lines 53-67 & Column 9 Lines 1-28).

Claim Rejections - 35 USC § 103

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

32. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Determining the scope and contents of the prior art.
Ascertaining the differences between the prior art and the claims at issue.
Resolving the level of ordinary skill in the pertinent art.
Considering objective evidence present in the application indicating obviousness or nonobviousness.

33. Claims 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (US Patent No. 6,381,321 and Brown hereinafter) in view of Bhagavath et al. (US Patent No. 6,363,150 and Bhagavath hereinafter).

34. As per claim 8 Brown discloses monitoring and tracking the usage of local resources by a plurality of telecommunications applications; associating the resources consumed by user, (See Column 10 Lines 37-67 & Column 11 Lines 1-12);

However, Brown does not explicitly teach computing a bill based on the resources consumed.

Bhagavath teaches computing a bill based on the resources consumed, (See Column 4 Lines 28-64).

Therefore it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention to modify the teaching of Brown with the teachings of Bhagavath to include computing a bill based on the resources consumed with the motivation to provide for telephone subscribers to select one of a plurality of security levels (i.e., resources) that may be required to ensure privacy during a call. Since each level of security (i.e., resource) is based on a different encryption and authentication algorithm, the levels of security can be incrementally priced. Accordingly, selecting an algorithm which is deemed to be very secure can be billed to the subscriber at a higher rate than an algorithm that is deemed to be less secure. This cost differential to the subscriber can be justified because of the direct correlation between the algorithm sophistication, quality and cost, (See Bhagavath Column 2 Lines 40-50).

Conclusion

35. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

c. Huang et al. (US Patent No. 6,714,217) discloses system and method for providing a graphical user interface to, for building and/or for monitoring a telecommunications network.

d. Mansey et al. (US Patent No. 6,023,499) discloses real time billing via the internet for advanced intelligent network services; and

e. Ramaswany et al. (US Patent No. 6,424,621) discloses software interface between switching module and operating system of a data packet switching and load balancing system.

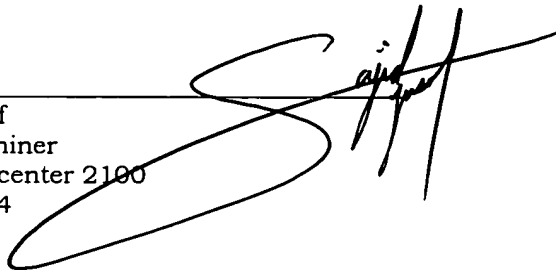
36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sajid A Yussuf whose telephone number is (703) 305-8752. The examiner can normally be reached on Monday-Thursday 7:30-5:00 PM and Alternate Fridays.


37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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38. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Sajid Yussuf
Patent Examiner
Technology center 2100
21 May 2004

A large, stylized handwritten signature in black ink, appearing to read 'Sajid Yussuf', is written over the printed name and date.


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER